

RECEIVE PROCESSING WITH NETWORK PROTOCOL BYPASS

ABSTRACT

An adapter is provided with intelligence that allows it to separate the header parts of a packet being received from the payload it carries, and in most cases move the payload directly into a destination buffer at the application layer or file system layer. Copies by the intermediate layers of the protocol stack are bypassed, reducing the number of times that the payload of a communication must be copied by the host system. At the network interface, a plurality of packets is received, and the payload of each is bypassed directly into the target destination buffer. The network interface device identifies the packets which are in the sequence of packets carrying payload to be stored in the target buffer by the flow specification carried with such packets. Also, the packets carrying data payload for the file include a sequence number or other identifier by which the network interface is able to determine the offset within the target buffer to which the packet is to be stored.